

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-7 (Cancelled)

8. (Previously Presented) A method of using an assay plate on an animal, comprising:

providing a flexible substrate with a raised pad extending from a flexible substrate surface thereof, where said raised pad has a substantially planar sample receiving surface configured for receiving a sample thereon and no wall extending beyond and surrounding said sample receiving surface;

attaching said flexible substrate onto an animal;

depositing a sample on said raised pad; and

performing an experiment using said sample on said raised pad.

9. (Original) The method of claim 8, further comprising drying said sample before said performing an experiment.

10. (Original) The method of claim 9, further comprising, after said drying, depositing a different sample on said raised pad and drying said different sample.

11. (Previously Presented) The method of claim 9, further comprising, after said drying, redepositing said sample on said raised pad and redrying said sample.

12. (Original) The method of claim 8, wherein said depositing comprises depositing an amount of sample on said pad sufficient to form a raised droplet without substantially spilling off said sample receiving surface.

13. (Previously Presented) The method of claim 8, further comprising etching a material to form said substrate and said raised pad.

14. (Previously Presented) The method of claim 8, further comprising injection molding or casting said raised pad and said substrate.

15. (Original) The method of claim 8, further comprising overlaying said sample with a membrane or tissue.

16. (Previously Presented) A method of determining optimal medical device compositions or formulations, comprising:

preparing an array of samples supported by a planar sample receiving surface of an assay plate comprising a first lower member comprising a substrate having a substrate surface; a plurality of raised pads extending from said substrate surface, each raised pad having a substantially planar sample receiving surface configured for holding a sample thereon for *in situ* experimentation; and a second upper member comprising a reservoir plate having an array of openings, that when secured, are aligned with said planar sample receiving surface forming to form wells or reservoirs, each sample comprising an active component and at least one additional component, wherein each sample differs from at least one other sample with respect to at least one of:

- (i) the identity of the active component,
- (ii) the identity of the additional components,
- (iii) the ratio of the active component to the additional component, or
- (iv) the physical state of the active component;

securing a reservoir plate to the planar sample receiving surface, the reservoir plate having an array of holes that when secured are aligned with said planar sample receiving surface forming wells or reservoirs;

filling the array of reservoirs with a reservoir medium; and

determining rate of release of the active component from each sample in said array of samples into the reservoir medium to determine an optimal medical device formulation

17. (Previously Presented) The method of claim 16, wherein said reservoir plate is secured on top of said assay plate.

18. (Previously Presented) The method of claim 16, wherein the size or diameter of the holes or openings of the reservoir plate are smaller than the size or diameter of the planar receiving surface.

Claims 19-21 (Cancelled)